

The Brain

Protecting one's brain from injury is one of the most important considerations when cycling. Head protection is a greater concern when cycling than when riding in a vehicle. Notice how the skull serves as a protective covering for the brain. Note the thickness of the skull. Look at common objects in the classroom and compare the thickness of the skull to these. For example:

1. Is the skull as thick as, thicker than, or less thick than, *a piece of paper*? (**thicker**)
2. Is the skull as thick as, thicker than, or less thick than, *a desk top*? (**thick as**)
3. Is the skull as thick as, thicker than, or less thick than, *the wall*? (**less thick than**)
4. Is the skull as thick as, thicker than, or less thick than, *a book*? (**depends on book width**)
5. Is the skull as thick as, thicker than, or less thick than, *a pencil*? (**thick as**)

(The human skull is about a ¼ inch thick)

Like other bones in the body, the skull can be broken or fractured with moderate ease. When this happens, the soft brain tissue inside the skull can be seriously injured. Even if the skull bone is not broken, the brain can be badly injured when the head receives a hard blow because the brain moves around inside the skull and can be damaged by this kind of trauma.

An injury that breaks the skull is called an "open-head" injury; one that does not is called a "closed head" injury. Both types of injuries are very, very serious. Sometimes brain injuries are fatal; other times brain injuries can cause problems that never go away – they are permanent. Depending upon what part of the brain is injured in a crash, a person may have dreadfully serious problems with activities such as seeing, walking, talking, reading, and so on. This is why it is important to **ALWAYS** wear a helmet when riding a bicycle or doing other activities which could result in a fall or injury to the head.

Functions of the BRAIN

Parietal lobe

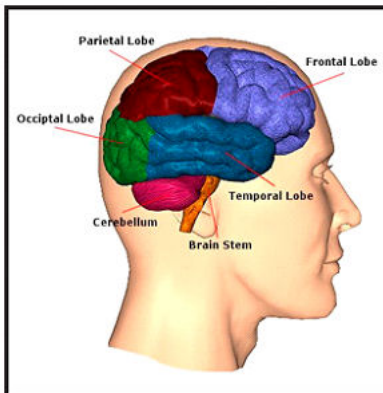
- intelligence
- language
- reading
- sensation

Occipital lobe

- vision

Cerebellum

- balance
- coordination



Frontal lobe

- behavior
- intelligence
- memory
- movement

Temporal lobe

- behavior
- hearing
- memory
- speech
- vision

Brain stem

- blood pressure
- breathing
- consciousness
- heartbeat
- swallowing